



The State of New Hampshire
Department of Environmental Services

Clark B. Freise, Assistant Commissioner



October 27, 2017

Timothy H. Watkins
Acting Director, National Exposure Research Laboratory
USEPA Office of Research and Development
109 TW Alexander Dr MC 305-01
RTP, NC 27711

**Subject: New Hampshire Department of Environmental Services Request for Additional Assistance
Assessing Poly- and Perfluoroalkyl Substances**

Dear Mr. Watkins:

The New Hampshire Department of Environmental Services (NHDES) is requesting additional assistance for completing analyses of long and short-chain poly and perfluoroalkyl substances (PFAS) in industrial coating formulations and air emissions taken directly from the stacks located at a site where processes are currently utilizing PFAS-containing raw materials. This site has historically released PFAS into the environment and has contaminated soil and water, including groundwater used as drinking water for tens of thousands of people in the state. NHDES is concerned that ongoing air emissions of certain PFAS may be occurring in the absence of air pollution controls.

NHDES is currently using commercial laboratories to complete analyses that report results of 14 to 23 traditional PFAS compounds. NHDES has attempted to coordinate with a laboratory to analyze for a shorter chain PFAS compound variant that was reported to have replaced PFOA at the above reference facility. Despite analyzing over 1,000 samples from private and public drinking water wells in an area where groundwater has been contaminated with PFOA, this replacement compound has yet to be detected in water near this site. However, the replacement compound was detected in previous stack samples at the site and has been detected associated with other sites elsewhere in the country.

Assistance from the United States Environmental Protection Agency (USEPA) is needed to test for environmental contaminants that are potentially being released to the air and impacting the environment. USEPA's assistance is needed to overcome technical barriers for completing this work to date including: 1) commercial laboratory analytical limitations for handling more complex sample matrices; 2) unknown nature of the compounds because they are proprietary, manufacturing byproducts or degradation compounds contained in raw materials; and 3) lack of expertise and experience associated with advanced fluorochemistry and its fate and transport properties. USEPA could assist by analyzing samples using high resolution mass spectrometry with a comprehensive assessment of the spectral data using library searches.

NHDES will utilize this information to:

- (1) Understand the current emissions of fluorinated compounds generated when utilizing current chemical formulations;
- (2) Assess if conditions warrant the installation of treatment systems for air emissions to proactively prevent the contamination of the environment and drinking water with the newer alternative chemicals or precursor compounds;
- (3) Ensure any potential air pollution control equipment systems that may be required to be installed are designed to remove not only PFOA and PFOS compounds but also any other PFAS compounds and associated degradates, some which could be precursors to the formation of PFOA and PFOS. This information is critical for ensuring any air pollution control equipment is properly designed for potential PFAS emissions and that remediation systems removing PFOA and PFOS do not unknowingly redistribute other PFAS contaminants;
- (4) Differentiate sources of contamination when and where there is the potential for multiple sources of contamination by identifying a signature of distribution of compounds for different sources of PFAS; and
- (5) Prioritize what contaminant(s) need a risk assessment based on what is actually being measured in the environment via the air emission pathway.

We greatly appreciate your assistance on this matter. We look forward to our continued partnership in successfully addressing these emerging drinking water contaminants. Please do not hesitate to contact me (Clark.Freise@des.nh.gov, (603)271-8806) or Catherine Beahm (Catherine.Beahm@des.nh.gov, (603) 271-2822) should you have any questions.

Sincerely,



Clark B. Freise

Assistant Commissioner

cc: Meghan Cassidy, USEPA Region 1
Andy Lindstrom, USEPA ORD
Michael Wimsatt, NHDES
Lea Anne Atwell, NHDES
Eugene Forbes, NHDES
Brandon Kernan, NHDES
Michael Fitzgerald, NHDES
Cathy Beahm, NHDES